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D. G. WILLIAMS

2,023,158

HAND GRENADE

Filed July 27, 1934

Fig. 1.

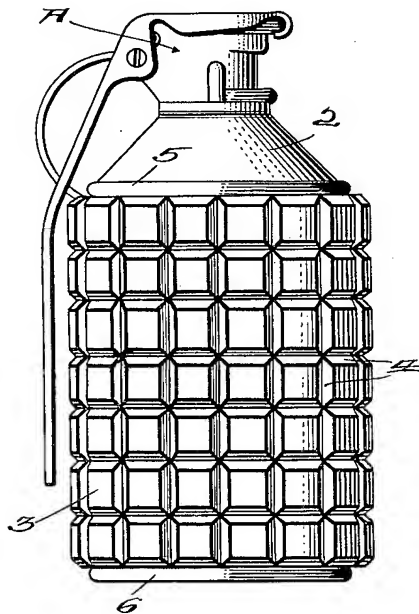


Fig. 2.

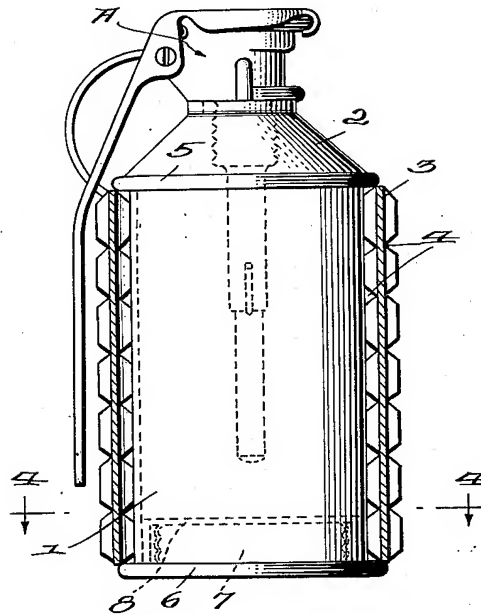


Fig. 3.

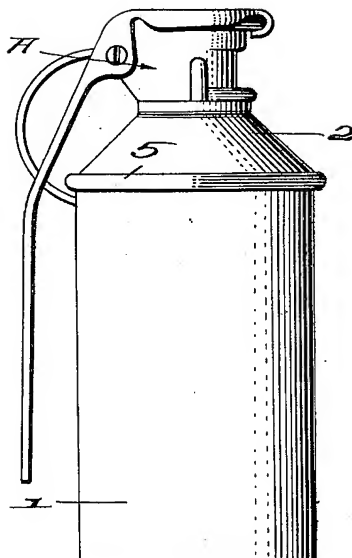
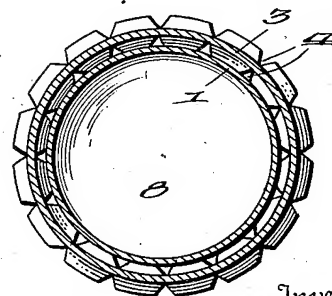


Fig. 4.



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HAND GRENADE

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4 Claims. (Cl. 102—29)

This invention relates to a hand grenade of the type commonly used in trench warfare, in which is contained an explosive charge, and means for exploding the same.

5 The primary object of the invention is to provide such a grenade which is adapted to be employed selectively as a defensive weapon with the shell of the grenade bursting into flying fragments normally out of range of the user or
10 thrower, or as an offensive weapon without producing flying fragments whereby the grenade may be thrown at relatively close range without subjecting the thrower to any appreciable degree of danger.

15 A further object of the invention is to provide a hand grenade possessing the foregoing characteristics, whereby a fighting unit may be equipped with a supply of grenades of a single type without sacrificing the advantages usually obtained
20 only by carrying one type of grenade for relatively long ranges, and another type for relatively short ranges, thereby materially increasing the available supply for whatever range is most needed, without any increase in the total number
25 of grenades carried.

A hand grenade capable of accomplishing the foregoing objects and advantages is illustrated in the accompanying drawing, in which:

30 Figure 1 is an elevation showing the grenade as employed at relatively long ranges.

Figure 2 is a vertical section through the grenade proper as shown in Figure 1, with the bouchon assembly shown in elevation.

35 Figure 3 is an elevation showing the grenade as employed at relatively short ranges.

Figure 4 is a transverse section through the grenade taken at a point indicated by the line 4—4 on Figure 2.

Referring to the drawing in detail, the numeral
40 1 indicates a container made of paper or other non-fragmenting material and adapted to contain a charge of explosive. Secured to or formed with the upper end of the container 1 is a connecting member 2 for a bouchon assembly A
45 which may be of any well known type operating in the usual manner and capable of exploding the charge of explosive within the container 1.

Removably fitting about the container 1 is a shell 3 made of any fragmenting material suitable for the purpose and preferably provided in its inner and outer faces with the usual grooves
50 4 for the purpose of enhancing the fragmenting qualities of the shell. The shell 3 is held seated against a rim 5 at the lower extremity of the
55 connecting member 2 by a cap 6 which may be

connected with the container 1 in any suitable manner such as by threading a flange portion 7 into a socket forming member 8 secured to or formed with the container 1 at the lower end of the latter.

In the use of the grenade, the parts are assembled as shown in Figures 1 and 2, and as thus shown, the grenade is thrown in the usual manner when employed at relatively long ranges at which there is little or no danger to the thrower
10 from flying fragments of the shell 3, liberated by the explosion of the charge within the container 1. If it is desired to use the grenade at relatively short ranges at which the thrower would be in substantially the same danger from flying
15 fragments of the shell 3 as the one at which the grenade is thrown, the cap 6 and shell 3 are removed, and the grenade as shown in Figure 3 is then thrown in the usual manner. When used as last described, owing to the non-fragmenting
20 qualities of the container 1, the latter merely bursts upon the explosion of the charge therein, with little likelihood of resulting harm except to any one in extremely close proximity thereto.

It will be readily seen that a user equipped with 25 a single grenade as shown and described herein is in possession of an effective weapon which may be used at relatively long ranges, or in close, hand-fighting, as desired.

The embodiment of the invention herein illustrated and described is intended to portray a practical and desirable example of the same, but is not intended to restrict the invention beyond the limitations imposed in the appended claims.

I claim:

35 1. A hand grenade comprising a substantially non-fragmenting container for an explosive charge, an exploding device, a connecting member connecting the exploding device with said container, a rim forming a part of said connect-
40 ing member, a removable fragmenting shell encircling said container, and means for normally maintaining the shell in engagement with said rim.

2. In a hand grenade, a substantially non-
45 fragmenting container for an explosive charge, a removable fragmenting shell encircling the container, a socket forming member forming a part of the container, and a cap removably connected with said socket forming member for normally
50 maintaining the shell in position with respect to the container.

3. A dual-purpose hand grenade comprising a non-fragmenting detonatable assembly of an explosive charge and a substantially non-fragment-
55

- ing container for such explosive charge and an integrally connected mechanical exploding device capable of bringing about the detonation of the explosive charge, and means for surrounding the
- 5 substantially non-fragmenting container with a removable fragmenting shell for the purpose of transforming the non-fragmenting explosive assembly at will into a fragmenting explosive assembly.
- 10 4. A dual purpose hand grenade comprising a non-fragmenting detonatable assembly of an explosive charge and a substantially non-fragment-

ing container for such explosive charge and a mechanical exploding device capable of bringing about the detonation of the explosive charge, the whole constituting what is called an offensive hand grenade, and means for surrounding the

5 substantially non-fragmenting container with an attachable fragmenting shell for the purpose of transforming the offensive hand grenade at will into a fragmenting hand grenade assembly of the type called a defensive hand grenade. 10

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